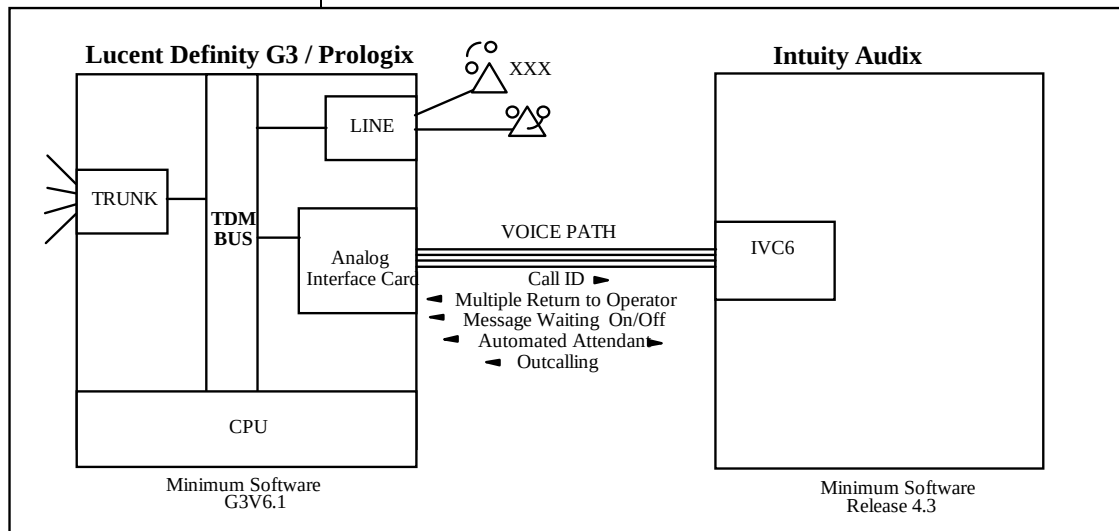


Avaya Definity G3 / ProLogix (in-band / mode code)



With inband integration, one pathway between the PBX and Intuity system transmits both call information and voice communications

1.0 METHOD OF INTEGRATION

With inband integration, one pathway between the PBX and the Intuity™ transmits both call information and voice communications. The pathway is provided by 2-wire analog single-line circuits that connect to IVC6 Cards in the Intuity system. The IVC6 simulates 2-wire analog lines. Calls to an Intuity port are preceded by the called party information from the PBX in DTMF format. The Intuity answers and plays the appropriate greeting. Message-waiting indication is set and canceled using DTMF commands over the same pathway.

Avaya Intuity Requirements

2.0 AVAYA INTUITY ORDERING INFORMATION

- Tip/Ring Voice Port Cards (IVC6), six analog connections per card
- Serial and Inband Integration Software (FID 12 or higher)
- INTUITY Software Release 5.0 or higher

PBX hardware requirements

3.0 PBX HARDWARE REQUIREMENTS

- TN742 or TN746B Analog ports, one per Intuity port

3.1 PBX SOFTWARE REQUIREMENTS

- Minimum Software: G3 V 6.1

Supported integration features**4.0 SUPPORTED FEATURES**

- Call coverage to personal greeting
 - busy
 - ring-no-answer
 - all calls
- Message-Waiting Indicator
 - lights
 - audible message waiting (optional PBX feature)
- Automated Attendant
- Outcalling, Paging
- Multiple return-to-operator
- Direct Call
- Personal greeting of original-called party on a double-call forward using call coverage
- Reply to message left by subscriber in internal telephone-answering mode
- Call Sender

Configuring the PBX to integrate**5.0 CONFIGURING THE PBX TO INTEGRATE**

Five tasks must be completed when programming the PBX to integrate. They are as follows:

- Enable Mode Code Integration.
- Configure each analog voice port.
- Configure the analog voice ports into a UCD group.
- Create call coverage path(s) that include the Intuity system access number.
- Change subscriber's station programming to include the call coverage path.

5.1 MODE CODE SWITCH ADMINISTRATION

Feature Administration to Enable Mode-Code Integration.

- Use the switch's Customer Options form to enable mode code integration.

Proceed as follows:

1. Enter the command: **change system-parameters customer-options** and make sure the G3 Version (on the first line) is set to **V6**.

Define the analog voice ports
that will connect to the Intuity
system

2. Change to page 2.
3. Set the Mode Code Interface? field on this screen to **Y**.

5.2 ANALOG VOICE PORTS ADMINISTRATION

- o Define the integrated analog voice ports that will connect to the Intuity using the ADD STATION command. Sequential numbering is recommended. The FEATURE *OPTIONS* must be configured as follows. (Refer also to *Table 2*.) Repeat for each analog port.

Type: VMI
 Name: VOICEMAIL
 Tests? N
 LWC Reception? N
 LWC Activation? Y
 Switchhook Flash? Y
 Adjunct Supervision? Y (*Open Loop Disconnect*)

All other fields can set to no or default.

Configuring Hunt Group for the
Intuity ports

5.3 HUNT GROUP ADMINISTRATION

After all the analog lines to be connected to the Intuity ports are configured, they need to be installed into a Hunt Group.

- o Define the Hunt Group on the PBX by entering “**add hunt-group** **<hunt group number>**” or “**add hunt-group next**” for the next available hunt group number. Configuring the hunt group as “**ucd**” is recommended. Below is an example of how a hunt group is configured:

ADD HUNT-GROUP 11

Add hunt-group 11	HUNT GROUP		Page 1 of 6
Group Name: VOICEMAIL			
Group Number: 11	Group Extension: 5000	Group Type: ucd	
		ACD? n	
Queue? y	Vector? n		
Security Code:		COR: 1	
ISDN Caller Disp: grp-name³		TN: 1	
Queue Length: 15			
Calls Warning Threshold:	Calls Warning Port:		
Time Warning Threshold:	Time Warning Port:		

Note: ³ Enter *grp-name* to specify the hunt group name be sent to the originating user. This field is required when the ISDN-PRI option on the switch System-Parameters Customer-Options screen is enabled.

Add hunt-group 11

Page 2 of 6

HUNT GROUP

Message Center: none

LWC Reception: none

AUDIX Name:

Messaging Server Name:

Add hunt-group 11

Page 3 of 6

HUNT GROUP

Group Number: 11

Group Extension: 5000

Group Type: ucd

Member Range Allowed: 1 - 999

Administered Members (min/max): 1 /4

Total Administered Members: 4

GROUP MEMBER ASSIGNMENTS

Ext	Name	Ext	Name	Ext	Name
1:	5001 VOICEMAIL	7:		13:	
2:	5002 VOICEMAIL	8:		14:	
3:	5003 VOICEMAIL	9:		15:	
4:	5004 VOICEMAIL	10:		16:	
5:		11:		17:	
6:		12:		18:	

5.4 CALL COVERAGE PATH ADMINISTRATION

A coverage path forwards calls to another extension if the station is in use or not answered. Placing the Intuity UCD Group number in a Coverage Path will send busy and ring-no-answer calls to the Intuity to be answered.

Enter 'ADD COVERAGE PATH n' -- n is an available coverage path number.

- Define the coverage path as desired. For the following conditions, specify that you want such calls to be answered by the Intuity by entering 'y'. Usually, call coverage is programmed for both inside and outside calls, for Busy and Don't Answer conditions.
- Active:** If any call appearance is off hook, calls will forward.
Busy: If all call appearances are offhook, calls will forward.
Don't Answer: Unanswered calls forward after the specified number of rings.
All: All calls forward immediately without ringing the subscriber's station.

Assign the Intuity ports Hunt Group as the coverage point for each subscriber

- o For coverage Point1, assign the Hunt Group number created for the INTUITY ports.

5.5 SUBSCRIBER ADMINISTRATION

- o To program subscribers stations for integration, enter 'CHANGE STATION xxxx'. Follow these steps for each telephone:
 - Name: Enter a valid name entry.
 - Coverage Path: Enter the number you previously assigned to the coverage path for the INTUITY system.
 - LWC Reception? *see notes below*
 - LWC Activation? *n*
 - Message Waiting Indicator? *y (analog stations only)*
 - These are the only changes required for integration. Do not change any other field.

NOTES:

- All users stations with message-waiting indicators must be programmed with:
- LWC Reception? *msa-spe*
- Audible Message Waiting Indicator is supported in conjunction with lamps only if this optional feature is enabled on the PBX.

6.0 CONFIGURING THE INTUITY

- o The following define the steps required on the Intuity

HINT: When changes to the Switch Interface Administration are completed, a message appears on the screen indicating to restart the INTUITY voice system. However, this task is not required after each step. Once ALL changes are completed the system must then be restarted.

NOTE: The Switch Selection Menu can only be viewed. Changes to the switch selection menu can be called into the TSO._

- Switch Selection
 - Select "Switch Interface Administration" menu
 - Select "Switch Selection" menu
 - Administer parameters as follows:
 - Country: <Press F2 {CHOICES}>.
 - Switch: Prologix Mode Code

- Assign PBX Extensions to Channels
Select “Voice System Administration” menu
Select “Voice Equipment” menu
Select “Actions “ button
From the “Assign. Change” screen,
Select “PBX Extension to Channel” option
Assign the extension numbers computed in the above step to all used voice channels.
- Assign Service to Channels
Select “Voice System Administration” menu
Select “Voice Equipment” menu
Select “Actions “ button. This will bring up the “Actions Menu”
From the “Assign. Change” screen,
Select “Services to Channels” option
Assign DNIS as service to all channels.
- Assign Number Services to Channels
Select “Voice System Administration” menu
Select “Number Services” menu
Select “Assign/Change” option
Administer parameters as follows:
 Called Numbers : any
 Calling Numbers: any
 service Name: AUDIX
- Assignment of Channel to Groups
 Select “Voice System Administration” menu
 Select “Voice Equipment” menu
Select “ACTIONS” button, this will bring up the Actions menu.
Select “Assign/Change” option
From the Assign/Change screen, select “Channels to Groups” option.

NOTE: By default all channels are assigned to group 2. The dedicated MWI channel *must* be assigned to a *different group* to ensure that the same channel that turns on MWI lamp turns off the lamp. This is a switch limitation. Dedicated MWI channels that are assigned to a different group must also be “unassigned” from group 2. If more than one dedicated MWI channel, each channel should be in a different group. By convention the highest channels are used as dedicated MWI channels.

- Transfer Security Assignment
Select “Voice System Administration” menu
Select “Transfer Security” menu
Assign restrictions if any used.

- Message Waiting MWI Device Assignment
Select “Switch Interface Administration” menu
Select “Call Data Interface Administration” menu
Select “MWI Administration” menu
Select “Device Assignment” option
Administer parameters as follows:
If the group of channels for MWI updates is 3, the screen will look like figure 1.

Link Test [Y/N]:	Link Test Interval:	
Switch Number	Device ID	Link Test Number
1	3	

Figure 1

- System Translation Administration
Select “Switch Interface Administration” menu
Select “Call Data Interface Administration” menu
Select “System Translation Administration” menu
Select “Dial Plan Translation” option
Administer the following:
INTUITY Extension Length: <Switch Subscriber extension length>
Administer extension ranges in the table as follows:
- 1) Leave “Switch Prefix” field blank
2) Enter the valid extension ranges in “Switch Start Ext.” and “Switch End Ext.” fields
3) Leave “INTUITY Prefix” field blank
4) Enter the Switch number in the entry. This is the same number used in the AUDIX subscriber database
5) Enter “N” in the remote [Y/N] field

The following example shows how this form should be filled, if the extension length is 3 digits on the INTUITY and the valid extension ranges on the switch begin 1111 through 1222 and 2555 through 2999, while INTUITY subscribers ranges are 111 through 222, 555 to 999.

INTUITY Extension Length: 3				Switch Network Access Code:	
Switch Prefix	Switch Start Ext.	Switch End Ext.	INTUITY Prefix	Switch Number[Y/N]	Remote
1	111	222		1	N
2	555	999		1	N

- Auto Attendant Setup for Day/Night Service
Administer the appropriate Business Schedule and Holiday Schedule

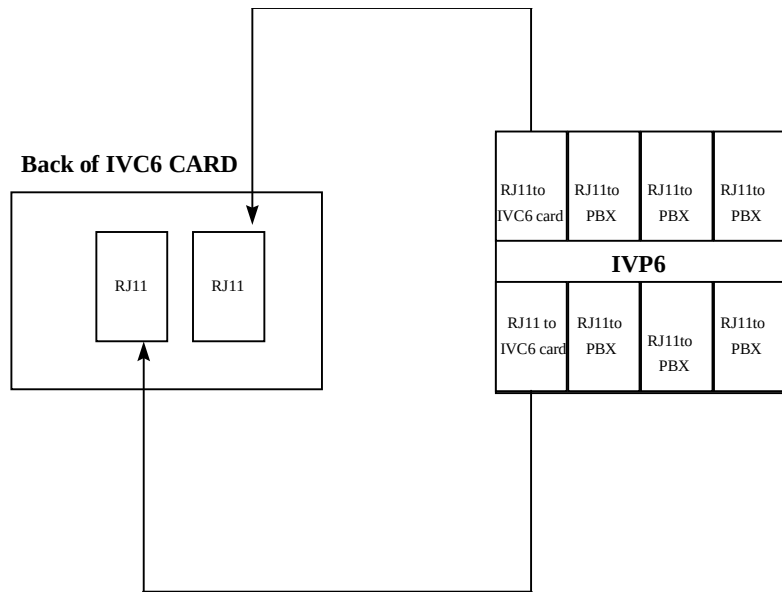
Select “AUDIX Administration” menu
Enter “Change Auto-attendant-routing-routing table”
Administer parameters as follows:

<i>AUTO-ATTENDANT ROUTING TABLE</i>					
Route Table Administration					
Incoming Called Number	Business Schedule	Holiday Schedule	Day Service Mailbox	Night Service Mailbox	Alternate Service
Mailbox ???	Bus1	Hol1	???	???	

NOTE: Day Service and Night Service Mailboxes will have to be administered and an appropriate greeting must be recorded.

7.0 HARDWARE INSTALLATION

- o Each IVC6 card supports six analog (tip/ring) connections. The voice path between the Prologix and the INTUITY requires three pairs into each RJ11 connection of the IVC6 card. The following shows an example of how lines would be physically connected using a IVP6 connector. Customers have the option to use other methods of connectivity, provided they bring three pairs (6 wires) to each RJ11 on the back of the IVC6 card.



- o To ensure the ports are physically connected correctly, ask the switch a administrator to place calls to each individual INTUITY voice channel one at a time. Use the “System Monitor” menu in INTUITY to monitor that the correct channel is dialed from the switch.

7.2 TESTING THE INSTALLATION

Testing the installation when complete

- o Refer to the AUDIX Administration manual for further details on testing the installation.
- o Create two mailboxes associated with two test extensions. Record a name and personal greeting for each mailbox.
- o Using one test extension, call the other test extension. You should hear the appropriate greeting (see test scenarios below).

Leave a message. Verify that message waiting indication turns on.

Test call coverage scenarios:

Forward all calls - When a subscriber forward all calls to the Intuity number, calls placed to the subscriber should follow the correct Intuity prompt should be played for that subscriber.

Busy - Place a call to a busy extension. This should follow the right coverage path and Intuity should play the NO ANSWER greeting.

Call no answer from Intuity scenario is the same as above.

- o Message waiting indicators -

Listen to the message left for the mailboxes above, delete the message and verify message waiting is turned off.

- o Test Transfers using “*T” option. From Audix mailbox. Transfer to another mailbox. Monitor the transfer time. Transfer to a station that is in a Do-Not-Disturb mode, busy mode, RNA mode.

The transfer time is approximately 5-8 seconds.

Test multiple transfers - set up phone A to transfer to Phone B and Phone B transfers to phone C. And phone C transfers to phone D. Determine how many transfers can be supported on the switch.

- o Call Disconnect - Leave a message for test mailbox, retrieve it and listen for the sign of the call progress tones. Place an external call and document the time it takes the Intuity to disconnect after the caller hangs up.

If there is no progress tone in the message, disconnect is working fine.

- o Zero (“()”) Out - Verify that return-to-operator works properly.
- o Call the Intuity from a test extension leave a message for a station with a voice mail button.

If the subscriber stations are programmed to support a button, which will dial the voice mail access number and the mailbox number followed by the # sign, the Intuity will prompt for the password. Do you hear “Please enter your password”.

- o Automated Attendant - Call the automated attendant mailboxes.

If the correct Auto Attendant mailbox is not reached and all above tests passed, the most likely problem will be in the switch translations. Check with the system administrator to endure proper translation.

- o Set up outcall notification in the test mailbox, leave a message to generate an outcall. Make sure ports are configured for Outcall

Intuity should call the number administered for out calling after the administered time has passed.

- o Incoming and Outgoing Fax

Send a fax to a subscriber mailbox from a fax machine. Press the start key on the fax machine. Check to see if fax arrived in the mailbox, and print the fax.

Send a fax from a subscriber’s mailbox to a fax machine. Check the fax machine to be sure the fax was received.

NOTE: If you encounter problems while performing these tasks, review the “switch log” before escalating problems to your local Technical Support Center.

Important notes regarding this
integration

8.0 CONSIDERATIONS

8.1 Unsupervised transfers require busy-call coverage. Calls that are transferred unsupervised to stations that are busy and are not call covered will be lost.

8.2 DCS is Lucent's networking package. In a DCS environment, subscribers on the remote nodes may not have the same integration feature functionality as those on the hub node. In general, all integration features are supported. Call Coverage support on the remote nodes is dependent on the type of switch and software as follows:

In all cases MWI is supported to the remote hubs over a DCS network.

8.3 To minimize the possibility of call collisions on ports used for outcalling, paging, fax, and networking applications, these ports should always be defined as the last steps in the hunt group.

8.4 Audix Networking is not supported through modems. Networking is supported using TCP/IP only.

8.5 Leave word calling is not supported. This is also known as call back message waiting notification.

8.6 The Intuity takes 4 seconds to tear down the call ID. Transfers could take 5-8 seconds to be completed.

8.7 Distinction call coverage for busy, no-answer, internal and external are not supported. All calls are re-directed to the Intuity. Audix are treated as no-answer external calls.

8.8 Check the availability of TN746B or TN742 analog ports in the AT&T Generic 3. These are both -48vdc circuit cards, required by the INTUITY for every voice port. The TN746 analog card is a -24vdc circuit card. This card is *not* supported.

8.9 Avaya highly recommends that analog ports be distributed among different port cards/shelves on the PBX. This reduces the possibility that a single card/shelf failure will affect a large number of INTUITY ports. Depending on PBX architecture, performance could also be an issue on some PBX's during high traffic if a large number of calls are being processed on the same card or shelf. The TN746B is an interface between analog voice terminal lines and the TDM/packet bus. The TN746B consists of a ringing application circuit and port input/output circuits. A TN746B supports 16 ports. The TN746B allows ringing on 4 ports of each half of the circuit pack for a maximum of eight simultaneous ports ringing. A user attempting to ring one half of the circuit pack when all four ports are busy receives a busy tone from the PBX. Therefore, when assigning analog ports to be used as bridged-appearances for

integration, always distribute the INTUITY ports across multiple TN746B cards.

CHANGE HISTORY		
Revision	Issue Date	Reason for Change
Version A	07/16/2003	Initial GA Release

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